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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/436,360	11/09/1999	ANDREW J. SANDERSON	PM244889/98	6505

7590

06/17/2004

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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/436,360

Applicant(s)

SANDERSON ET AL.

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 43-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 43-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/15/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on April 15, 2004 has been entered.

2. Claim 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The text of the claim is confusing, because it is unclear if the language denoted by "comprise" relates to the "monomers" or the "A-blocks". The examiner suggests that the language, "... the A blocks terminated with isocyanate-reactive groups are derived from monomers comprising at least one member ...", be used.

3. Claims 1-13 and 43-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support has not been provided for the claimed range of density values. Applicants have stated that Examples 3 and 4 provide support for the claimed range; however, the disclosure within Examples 3 and 4 only provides support for the exemplified compositions having the specific density values. In other words, support only exists for the specific

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composition of Example 3 having the density of 1.31 g/cm^3 and the specific composition of Example 4 having the density of 1.42 g/cm^3 .

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-13 and 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wardle ('613) in view of Biddle et al ('794) and Hinshaw et al ('603).

Wardle discloses the production of polyurethane elastomers, wherein the polymer comprises hard and soft segments linked by the reaction of the isocyanate reactive A segment and B segment with diisocyanates and linking compounds. Patentee further discloses the use of 2,4-toluene diisocyanate as a suitable asymmetric diisocyanate. See abstract and columns 4-9.

6. While Wardle discloses hard segments that meet those claimed by applicants, patentee fails to disclose the specific use of an oxirane-based soft segment, though patentee further fails to specifically limit the compound by species. However, the position is taken that the use of

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oxirane-based polymers as soft segments within hard segment/soft segment energetic thermoplastic elastomers was known at the time of invention. Biddle et al. disclose at column 6, the use of polyglycidyl azide and polyglycidyl nitrate as soft blocks within such polymers. Furthermore, Hinshaw et al. disclose at column 1 that such soft blocks contain secondary hydroxyl groups that are reactive with isocyanates. Hinshaw et al. further set forth procedures for enhancing the reactivity of oxirane-based polymers with polyisocyanates.

7. Therefore, in view of the teachings within the secondary references and especially in view of the teachings within Biddle et al. that the claimed oxirane-based polymers are viable soft segments for hard segment/soft segment energetic thermoplastic elastomers, the position is taken that it would have been obvious to utilize an oxirane-based segment as the soft segment of Wardle, because it has been held that it is *prima facie* obvious to utilize a known ingredient for its known function. In re Linder, 173 USPQ 356. In re Dial et al., 140 USPQ 244.

8. Applicants' argument that the prior art rejection should be withdrawn, because the references fail to disclose the claimed density range is not well taken. Given the apparent similarities between the compositions of the prior art and the instant compositions, in terms of formulation and utility, the position is taken that the prior art possesses overlapping density values. Applicants have failed to demonstrate any criticality associated with the claimed density range.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
June 13, 2004


RABON SERGENT
PRIMARY EXAMINER